

ATTORNEY DOCKET NO.5330.1 CUSTOMER NO. 24347

5

Ī

## ##

10

10

15

20

25

30



- 27 -

#### WHAT IS CLAIMED IS:

- 1. A method for encrypting a message, comprising: identifying a message to be encrypted, the message having a plurality of characters; providing an encryption key array having a plurality of records, each record of the encryption key array having a plurality of elements; associating characters of the message with the encryption key array; and
  - generating an encrypted message by storing a value representing the association of the encryption key array with characters of the message.
- 2. The method of claim 1 wherein providing the encryption key includes generating the encryption key such that each element of one of the plurality of records contains a value that is unique to the value contained in each other element in the same record of the encryption key array.
- 3. The method of claim 2 wherein associating the characters of the message with the encryption key array includes associating the character of the message with one of the plurality of records within the encryption key array and further associating the character of the message with one of the plurality of elements of the associated record of the encryption key array and obtaining the value contained within the associated element.
- 4. The method of claim 3 wherein associating the character of the message with one of

- 28 - ·

the plurality of records within the encryption key array comprises:

associating the position of the character within the message relative to other characters of the message with the position of one of the plurality of records within the encryption key array relative to other records of the encryption key array; and

associating the character of the message with the position of one of the plurality of elements within the associated record of the encryption key array.

ATTORNEY DOCKET NO.5330.1 CUSTOMER NO. 24347

- 29 -

5. An method for encrypting and decrypting a message, comprising:

identifying a message to be encrypted, the message having a plurality of characters;

generating an encryption key array having a plurality of records, each record of the encryption key array having a plurality of elements such that each element of one of the plurality of records contains a value that is unique to the value contained in each other element in the same record of the encryption key array;

associating characters of the message with the encryption key;

- generating an encrypted message by storing encrypted characters representing the association of the encryption key array with characters of the message;
- associating the encrypted characters of the encrypted message with the encryption key array; and
- generating an decrypted message by storing a value representing the association of the encryption key array with encrypted characters of the encrypted message.
- 6. The method of claim 5 wherein associating the characters of the message with the encryption key array comprises:
  - associating the position of the characters within the message relative to other characters of the

5

20

25

Ì. i

Ű.

20

25

- 30 -

message with the position of one of the plurality of records within the encryption key array relative to other records of the encryption key array;

associating the characters of the message with the position of one of the plurality of elements within the associated record of the encryption key array; and

determining the value contained within the associated element.

7. The method of claim 6 wherein associating the encrypted characters of the encrypted message with the encryption key array comprises;

associating the position of the encrypted character within the encrypted message relative to the other encrypted characters of the encrypted message with the position of one of the plurality of records within the encryption key array relative to the other records of the encryption key array; and

associating the encrypted characters of the encrypted message with the position of one of the unique values contained in one of the plurality of elements within the associated record of the encrypted key array.

## ATTORNEY DOCKET NO.5330.1 CUSTOMER NO. 24347

### PATENT APPLICATION

- 31 -

8. A computer-readable medium having computer-executable instructions for performing a method comprising:

identifying a message to be encrypted, the message having a plurality of characters;

providing an encryption key array having a plurality of records, each record of the encryption key array having a plurality of elements;

associating characters of the message with the encryption key array; and

generating an encrypted message by storing a value representing the association of the encryption key array with characters of the message.

- 9. The computer-readable medium of claim 8 wherein providing the encryption key array includes generating the encryption key array such that each element of one of the plurality of records contains a value that is unique to the value contained in each other element in the same record of the encryption key array.
- 10. The computer-readable medium of claim 9 wherein associating the characters of the message with the encryption key array comprises:

associating the position of the characters within
the message relative to other characters of the
message with the position of one of the
plurality of records within the encryption key
array relative to other records of the
encryption key array;

associating the characters of the message with the position of one of the plurality of elements

5

20

ļ. ±

25





### ATTORNEY DOCKET NO.5330.1 CUSTOMER NO. 24347

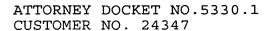
PATENT APPLICATION

- 32 -

within the associated record of the encryption key array; and

determining the value contained within the associated element.





- 33 -

11. A system for encrypting a message, comprising:
 a storage device;

a processor programmed to:

identify a message to be encrypted, the message having a plurality of characters;

provide an encryption key array having a plurality of records, each record of the encryption key array having a plurality of elements;

associate characters of the message with the encryption key array; and

generate an encrypted message by storing a value representing the association of the encryption key array with characters of the message.

- 12. The system of claim 11 wherein providing the encryption key array includes generating the encryption key array such that each element of one of the plurality of records contains a value that is unique to the value contained in each other element in the same record of the encryption key array.
- 13. The system of claim 12 wherein associating the characters of the message with the encryption key array comprises:

associating the position of the characters within
the message relative to other characters of the
message with the position of one of the
plurality of records within the encryption key
array relative to other records of the
encryption key array;

5

20

25







# ATTORNEY DOCKET NO.5330.1 CUSTOMER NO. 24347

PATENT APPLICATION

- 34 -

associating the characters of the message with the position of one of the plurality of elements within the associated record of the encryption key array; and determining the value contained within the

determining the value contained within the associated element.

- 14. The method of claim 13 wherein the processor is firmware.
- 15. The method of claim 13 wherein the processor is hardware.

10

15

20

25





ATTORNEY DOCKET NO.5330.1 CUSTOMER NO. 24347

PATENT APPLICATION

- 35 -

16. A method for concealing information within a data file, comprising:

providing a first data file having a plurality of records, each record of the first data file having a plurality of elements;

providing information having a plurality of elements; and

generating a second data file by combining elements of the information with elements of the first data file such that the first and second data files are substantially similar.

- 17. The method of claim 16 wherein generating the second data includes associating at least one element of the information with one of the plurality of records within the first data file and further associating the element of the information with one of the plurality of elements of the associated record of the first data file.
- 18. The method of claim 17 wherein the first data is a data file selected from a group of data files consisting of an audio file, a video file, an audio-visual file, and a graphics file, and wherein the second data file is a data file selected from a group of data files consisting of an audio file, a video file, an audio-visual file, and a graphics file.
- 19. The method of claim 18 wherein the information concealed within the data file is an encryption key array.

10

15



ATTORNEY DOCKET NO.5330.1 CUSTOMER NO. 24347

PATENT APPLICATION

- 36 -

- 20. The method of claim 17 wherein generating the second data file further includes obtaining a value relative to the association of the information with the first data file and storing the value in the second data file.
- 21. The method of claim 20 wherein the first data is a data file selected from a group of data files consisting of an audio file, a video file, an audio-visual file, and a graphics file, and wherein the second data file is a data file selected from a group of data files consisting of an audio file, a video file, an audio-visual file, and a graphics file.
- 22. The method of claim 21 wherein the information concealed within the data file is an encryption key array.